

**WHAT IS CLAIMED IS:**

1. An information processing system including:
  - a first information processing apparatus having a first communication port for transmitting and receiving data;
  - a second information processing apparatus having a second communication port for transmitting and receiving data; and
- 10 a communicating portion for executing bi-directional communication between the first communication port and the second communication port, the information processing system comprising:
  - 15 a utilizing portion for utilizing the communicating portion, for communication in a direction for which a first application program run on the first information processing apparatus sets the first communication port and the second communication port respectively as the sender and the destination of data; and
  - 20 a utilizing portion for utilizing the communicating portion, for communication in a direction for which a second application program run on the second information processing apparatus sets the second communication port and the first communication port respectively as the sender and the destination of data.
- 25 2. A storage system including:

a first storage device controller connected to a first storage device;

    a second storage device controller connected to a second storage device;

5       a first communication port that the first storage device controller has for transmission and reception of data;

10      a second communication port that the second storage device controller has for transmission and reception of data; and

    a communicating portion for carrying out bi-directional communication between the first communication port and the second communication port, and having:

15      a function for writing the data to be written to the first storage device also to the second storage device, the storage system comprising:

20      a utilizing portion for utilizing the communicating portion, for communication in a direction for which a first application program run on the first information processing apparatus sets the first communication port and the second communication port respectively as the sender and the destination of data; and

25      a utilizing portion for utilizing the communicating portion, for communication in a direction for which a second application program run on the second information processing apparatus sets the second communication port

and the first communication port respectively as the sender and the destination of data.

3. A storage system according to claim 2, wherein the  
5 utilizing portion for utilizing the communicating portion, for communication in a direction for which a first application program run on the first storage device controller sets the first communication port and the second communication port respectively as the sender and the  
10 destination of data includes:

a storing portion for storing in the first storage device controller communication direction defining information in which the first application program run on the first storage device controller sets the first communication port and the second communication port respectively as the sender and the destination of data, and for utilizing the communicating portion for communication in the direction defined in the information; and

20 a utilizing portion for utilizing the communicating portion, for communication in a direction for which a second application program run on the second storage device controller sets the second communication port and the first communication port respectively as the sender and the destination of data includes:

a utilizing portion for utilizing the communicating portion for communication in a direction for which the

second application program run the second storage device controller exchanges the communication ports allocated respectively as the sender and the destination of the communication direction defining information.

5

4. A storage system according to claim 2 further comprising:

10 a relating portion for relating a first storage area set logically in a storage area provided by the first storage device and a second storage area set logically in a storage area provided by the second storage device respectively to the duplication source and the duplication destination of data, and for writing the data to be written to the first storage area, also to the second storage area; and

15 a relating portion for relating the second storage area and the first storage area respectively to the duplication source and the duplication destination, and for writing the data to be written to the second storage area, also to the first storage area.

20 5. A first information processing apparatus in an information processing system including:

25 the first information processing apparatus having a first communication port for transmitting and receiving data;

a second information processing apparatus having a

second communication port for transmitting and receiving data; and

5 a communicating portion for executing bi-directional communication between the first communication port and the second communication port, the first information processing apparatus comprising:

10 a utilizing portion for utilizing the communicating portion, for communication in a direction for which an application program run on the first information processing apparatus sets the first communication port and the second communication port respectively as the sender and the destination of data.

15 6. A second information processing apparatus in an information processing system including:

a first information processing apparatus having a first communication port for transmitting and receiving data;

20 the second information processing apparatus having a second communication port for transmitting and receiving data; and

25 a communicating portion for executing bi-directional communication between the first communication port and the second communication port, the second information processing apparatus comprising:

a utilizing portion for utilizing the communicating

portion, for communication in a direction for which an application program run on the second information processing apparatus sets the second communication port and the first communication port respectively as the sender 5 and the destination of data.

7. A first storage device controller in a storage system including:

the first storage device controller connected to a 10 first storage device;

a second storage device controller connected to a second storage device;

a first communication port that the first storage device controller has for transmission and reception of 15 data;

a second communication port that the second storage device controller has for transmission and reception of data; and

a communicating portion for carrying out 20 bi-directional communication between the first communication port and the second communication port, and having:

a function for writing the data to be written to the first storage device also to the second storage device,

25 the first storage device controller comprising:

a utilizing portion for utilizing the communicating portion, for communication in a direction for which an

application program run on the first storage device controller sets the first communication port and the second communication port respectively as the sender and the destination of data.

5

8. A storage device controller according to claim 7, wherein the utilizing portion for utilizing the communicating portion, for communication in a direction for which an application program run on the first storage 10 device controller sets the first communication port and the second communication port respectively as the sender and the destination of data includes:

a storing portion for storing in the first storage device controller communication direction defining 15 information in which the application program run on the first storage device controller relates the first communication port and the second communication port respectively to the sender and the destination of data, and for utilizing the communicating portion for 20 communication in the direction defined in the information.

9. A storage device controller according to claim 7 further comprising:

a relating portion for relating a first storage area 25 set logically in a storage area provided by the first storage device and a second storage area set logically in a storage area provided by the second storage device

respectively to the duplication source and the duplication destination of data, and for writing the data to be written to the first storage area also to second storage area.

5 10. A second storage device controller in a storage system including:

    a first storage device controller connected to a first storage device;

10   the second storage device controller connected to a second storage device;

    a first communication port that the first storage device controller has for transmission and reception of data;

15   a second communication port that the second storage device controller has for transmission and reception of data; and

20   a communicating portion for carrying out bi-directional communication between the first communication port and the second communication port, and having:

    a function for writing the data to be written to the first storage device also to the second storage device, the second storage device controller comprising:

25   a utilizing portion for utilizing the communicating portion, for communication in a direction for which an application program run on the second storage device controller sets the first communication port and the second

communication port respectively as the sender and the destination of data.

11. A storage device controller according to claim 10,  
5 wherein the utilizing portion for utilizing the communicating portion, for communication in a direction for which an application program run on the second storage device controller sets the second communication port and the first communication port respectively as the sender  
10 and the destination of data includes:

a storing portion for storing in the second storage device controller communication direction defining information in which the application program run on the second storage device controller relates the second communication port and the first communication port respectively to the sender and the destination of data, and for utilizing the communicating portion, for communication in the direction defined in the information.  
15

20 12. A storage device controller according to claim 10 further comprising:

a relating portion for relating a first storage area set logically in a storage area provided by the first storage device and a second storage area set logically  
25 in a storage area provided by the second storage device respectively to the duplication source and the duplication destination of data, and for writing the data to be written

to the second storage area also to the first storage area.

13. A computer-readable medium containing a computer program software for causing an information processing system including:

5 a first information processing apparatus having a first communication port for transmitting and receiving data;

10 a second information processing apparatus having a second communication port for transmitting and receiving data; and

15 a communicating portion for executing bi-directional communication between the first communication port and the second communication port, to execute the steps of:

20 utilizing the communicating portion, for communication in a direction for which the first communication port and the second communication port are respectively set as the sender and the destination of data; and

25 utilizing the communicating portion, for communication in a direction for which the second communication port and the first communication port are respectively set as the sender and the destination of data.

14. A computer-readable medium containing a computer

program software for causing a storage system including:

a first storage device controller connected to a first storage device;

5 a second storage device controller connected to a second storage device;

a first communication port that the first storage device controller has for transmission and reception of data;

10 a second communication port that the second storage device controller has for transmission and reception of data; and

15 a communicating portion for carrying out bi-directional communication between the first communication port and the second communication port, and having:

a function for writing the data to be written to the first storage device also to the second storage device, to execute the steps of:

20 utilizing the communicating portion, for communication in a direction for which the first communication port and the second communication port are respectively set as the sender and the destination of data; and

25 utilizing the communicating portion, for communication in a direction for which the second communication port and the first communication port are respectively set as the sender and the destination of

data.

15. A computer-readable medium containing the computer program software according to claim 14, wherein the step  
5 of utilizing the communicating portion, for communication in a direction for which the first communication port and the second communication port are respectively set as the sender and the destination of data includes a step of storing in the first storage device controller  
10 communication direction defining information in which the first communication port and the second communication port are respectively related to the sender and the destination of data, and utilizing the communicating portion for communication in the direction defined in  
15 the information and wherein

the step of utilizing the communicating portions, for communication in a direction for which the second communication port and the first communication port are respectively set as the sender and the destination of  
20 data includes a step of utilizing the communicating portion, for communication in a direction for which the communication ports allocated respectively as the sender and the destination of the communication direction defining information are exchanged with each other.

25

16. A computer-readable medium containing a computer program software according to claim 14 comprising the

## steps of:

utilizing the communicating portion, for communication in a direction for which the first communication port and the second communication port are 5 respectively set as the sender and the destination of data;

10 relating a first storage area set logically in a storage area provided by the first storage device and a second storage area set logically in a storage area provided by the second storage device respectively to the duplication source and the duplication destination of data, and writing the data to be written to the first storage area, also to the second storage area;

15 utilizing the communicating portion, for communication in a direction for which the second communication port and the first communication port are respectively set as the sender and the destination of data; and

20 relating the second storage area and the first storage area respectively to the duplication source and the duplication destination of data, and writing the data to be written to the second storage area, also to the first storage area.